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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/973,182	10/10/2001	Seiichiro Okuda	50099-183	4482

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MCDERMOTT WILL & EMERY
600 13TH STREET, N.W.
WASHINGTON, DC 20005-3096

EXAMINER

MACARTHUR, SYLVIA

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 09/16/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/973,182	Applicant(s) OKUDA ET AL.	
	Examiner Sylvia R MacArthur	Art Unit 1763	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 13-16 is/are rejected.
- 7) ☒ Claim(s) 9-12 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on 10 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____. | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 1-7, 13, and 14 are rejected under 35 U.S.C. 102(e) as being anticipated by

Taniyama et al (US 6,247,479).

Regarding claims 1 and 13: Taniyama et al teaches a spin chuck 10 (holding and rotating section), a pure water supply section and chemical solution supply unit 64 and 62 (remover supplying section), and a nitrogen gas supply unit 66 (gas supplying section).

Regarding claim 2: Taniyama provides line tube 34 and line tube 35 (remover supplying tubes) and line tube 39 (gas supplying tube).

Regarding claim 3: Taniyama illustrates that the discharge ports 40-42, and 44 of the supplying tubes are concentric in Figs. 8 and 11.

Regarding claim 4: Taniyama teaches a plurality of exhaust ports formed in the bottom portion 20b and communicate with exhaust pipes 21, see col. 6 lines 33-44.

Regarding claim 5: The apparatus of Taniyama is inherently capable of the process limitation discussed.

Regarding claims 6 and 7: The apparatus of Taniyama is inherently capable of processing the type of apparatus discussed. These product by process claims are not given patentable weight.

Regarding claim 14: Inherently there is a time elapse to between the supply of the remover and the inert gas. Without an elapse of time, the remover would not function, as it would carry away by the gas.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Taniyama in view of Sato et al (US 4,968,375).

The teachings of Taniyama were discussed above.

Taniyama fails to teach slit-like gas blow ports.

Sato teaches an etching apparatus with slit-like ports 15. According to col. 6 lines 38-45, the valve 18 opens to discharge nitrogen outward from the ports.

The motivation to provide the apparatus of Taniyama with the slit-like ports of Sato is to enhance the exhaust system of Taniyama along the surface held by the spin chuck.

Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to provide the apparatus of Taniyama with the ports of Sato.

Art Unit: 1763

5. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Taniyama in view of Tran et al (US 6,453,916).

The teachings of Taniyama were discussed above.

Taniyama fails to teach what is being cleaned from substrate.

Tran teaches an apparatus and method of edge bead removal of photolithography resist processes, in col. 1 lines 32-52.

The motivation for cleaning with such apparatus as Taniyama is that photolithography resist processing leaves various types of organic matter on the substrate due to the physical processing and chemical reactions that take place.

Thus, it would have been obvious for one of ordinary skill in the art at the time of the claimed invention to use the apparatus of Taniyama in chemical environments like those discussed by Tran.

Allowable Subject Matter

6. Claims 9-12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.


7. The following is a statement of reasons for the indication of allowable subject matter:
The prior art of record fails to teach an aspirating section located opposite said gas nozzle.

Art Unit: 1763

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sylvia R MacArthur whose telephone number is 703-306-5690. The examiner can normally be reached on M-F during the core hours of 8 a.m. and 2 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory L. Mills can be reached on 703-308-1633. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.


Sylvia R MacArthur
Patent Examiner
Art Unit 1763

September 5, 2003